



IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VOLTERRA SEMICONDUCTOR)	
LLC,)	
)	Redacted - Public Version
Plaintiff,)	
)	
v.)	C.A. No. 19-2240-CFC-SRF
)	
MONOLITHIC POWER SYSTEMS,)	
INC.,)	
)	
Defendant.)	DEMAND FOR JURY TRIAL

**DEFENDANT MONOLITHIC POWER SYSTEMS, INC.'S
ANSWER TO VOLTERRA SEMICONDUCTOR LLC'S
SECOND AMENDED COMPLAINT**

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Dated: October 28, 2021

Defendant Monolithic Power System, Inc. (“MPS” or “Defendant”) respectfully submits its Answer in response to Plaintiff Volterra Semiconductor LLC’s (“Volterra” or “Plaintiff”) Second Amended Complaint (“SAC”). To the extent not specifically admitted herein, the allegations of the SAC are denied, including any allegations contained in the headings of the SAC.

PRELIMINARY STATEMENT

MPS is a leading semiconductor company that designs, develops and markets high-performance power solutions. MPS delivers highly integrated MPS products that offer energy efficient, cost-effective, and easy-to-use solutions for systems found in a wide variety of applications. With the explosive growth of cloud and virtual computing in recent years, MPS’s high performance products are becoming increasingly in demand for use in storage, computer, server, and workstation applications. MPS’s revenues have nearly doubled since 2015, with the computing and storage market representing the largest portion of MPS’s 2019 revenues.

Threatened by MPS’s success, Volterra filed suit against MPS in December 2019 asserting meritless claims of patent infringement. In Volterra’s haste to file suit, it selected a group of outdated patents that are both invalid and not infringed. Worse, Volterra’s selected patents are related to coupled inductors, a product that MPS does not design or sell. Volterra also brought this Second Amended Complaint alleging indirect infringement, even though it knew [REDACTED]

██████████, the only company it accuses in its pending amended infringement contentions of directly infringing the Asserted Patents. And Volterra further does not even have standing to sue, as it shares ownership of the Asserted Patents with ██████████. Volterra's Complaint is meritless.

NATURE OF THE ACTION

1. MPS admits that Volterra's SAC contains allegations of patent infringement under the patent laws of the United States, 35 U.S.C. § 1, *et seq.* MPS denies that there is any legal or factual basis for such action.

2. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

3. MPS admits that Volterra's SAC seeks monetary damages and injunctive relief to address MPS's alleged ongoing infringement. MPS denies that Volterra is the legal owner by assignment of the Asserted Patents, as ██████████ ██████████ is at least a co-owner. MPS denies the allegations of ongoing infringement in Paragraph 3, denies that this action has any merit, and denies that Volterra is entitled to any relief sought. MPS is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 3, and on at least that basis denies them.

THE PARTIES

4. MPS is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 4, and on at least that basis denies them.

5. MPS admits that it is a Delaware corporation. MPS denies the remaining allegations in Paragraph 5.

6. Denied.

JURISDICTION AND VENUE

7. Paragraph 7 contains legal conclusions to which no answer is required. To the extent an answer is required, MPS admits that Volterra's SAC contains allegations of patent infringement under the patent laws of the United States, 35 U.S.C. § 1, *et seq.* MPS denies that there is any legal or factual basis for such action.

8. Paragraph 8 contains legal conclusions to which no answer is required. To the extent an answer is required, MPS admits that this Court has subject matter jurisdiction pursuant to §§ 1331 and 1338(a), but MPS denies that there is any legal or factual basis for such action.

9. Paragraph 9 contains legal conclusions to which no answer is required. To the extent an answer is required, MPS admits for purposes of this action only that this Court has personal jurisdiction over it. MPS admits that it is incorporated in this District.

10. Paragraph 10 contains legal conclusions to which no answer is required. To the extent an answer is required, MPS admits for purposes of this action only that this Court has general personal jurisdiction over it. MPS denies the remaining allegations in Paragraph 10.

11. Paragraph 11 contains legal conclusions to which no answer is required. To the extent an answer is required, MPS admits for purposes of this action only that venue exists in this District for the claims against MPS pursuant to 28 U.S.C. § 1400(b). MPS admits that it is incorporated in this District.

FACTUAL BACKGROUND

12. MPS is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 12, and on at least that basis denies them.

13. MPS is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 13, and on at least that basis denies them.

THE ASSERTED PATENTS

14. MPS admits that the face of U.S. Patent No. 6,362,986 (“the ’986 patent”) states that it is entitled “Voltage converter with coupled inductive windings, and associated methods.” MPS admits that the face of the ’986 patent lists “Aaron M. Schultz” and “Charles R. Sullivan” as the “Inventors.” MPS denies that this listing is correct, as it at least omits Jieli Li. MPS admits that the face of the ’986 patent lists “Volterra, Inc.” as the “Assignee.” MPS denies that Volterra is the

original and current owner by assignment of the '986 patent, as the '986 patent is at least co-owned by [REDACTED]. MPS admits that Volterra attached what it purports to be a true and correct copy of the '986 patent as Exhibit A to the SAC. MPS denies that the '986 patent issued on March 22, 2001. MPS is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 14, and on at least that basis denies them.

15. MPS admits that the face of U.S. Patent No. 7,525,408 ("the '408 patent") states that it is titled "Method for making magnetic components with N-phase coupling, and related inductor structures," and that it issued on April 28, 2009. MPS admits that the face of the '408 patent lists "Jieli Li," "Charles R. Sullivan," and "Angel Gentchev" as the "Inventors." MPS denies that this listing is correct, as it at least incorrectly lists Angel Gentchev. MPS admits that the face of the '408 patent lists "Volterra Semiconductor Corporation" as the "Assignee." MPS denies that Volterra is the original and current owner by assignment of the '408 patent, as the '408 patent is at least co-owned by [REDACTED]. MPS admits that Volterra attached what it purports to be a true and correct copy of the '408 patent as Exhibit B to the SAC. MPS is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 15, and on at least that basis denies them.

16. MPS admits that the face of U.S. Patent No. 7,772,955 (“the ’955 patent”) states that it is titled “Method for Making Magnetic Components with N-Phase Coupling, and Related Inductor Structures,” and that it issued on August 10, 2010. MPS admits that the face of the ’955 patent lists “Jieli Li,” “Charles R. Sullivan,” and “Angel Gentchev” as the “Inventors.” MPS denies that this listing is correct, as it at least incorrectly lists Angel Gentchev. MPS admits that the face of the ’955 patent and lists “Volterra Semiconductor Corporation” as the “Assignee.” MPS admits that Volterra attached what it purports to be a true and correct copy of the ’955 patent as Exhibit C to the SAC. MPS denies that Volterra is the original and current owner by assignment of the ’955 patent, as the ’955 patent is at least co-owned by [REDACTED]. MPS is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations in Paragraph 16, and on at least that basis denies them.

ACTS GIVING RISE TO THIS ACTION¹

17. Denied.

18. MPS admits that Volterra’s SAC accuses the 48V-1V Power Solution for CPU, SoC or ASIC Controller and substantially similar products. MPS denies the remaining allegations in Paragraph 18.

19. Denied.

¹ MPS recites the headers used by Volterra in its complaint for convenience only.

20. Denied.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,362,986

21. MPS incorporates by reference its responses to Paragraphs 1-20 as if fully set forth herein.

22. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

23. Denied.

a. MPS admits that it communicated with Intel Corporation in approximately June 2019. MPS denies the remaining allegations in Paragraph 23(a).

b. Denied.

c. Denied.

d. Denied.

i. MPS admits that Jinghai Zhou has been employed by MPS since February 2006. MPS admits that he held the title of Director of Applications until January 2019 when he became a Senior Director of the Cloud Computing Product Line for MPS. MPS admits that Mr. Zhou submitted a declaration in this case where he stated that in this role, he "communicate[s] regularly with customers about MPS

products and opportunities to work together on products.”

(D.I. 43 at ¶ 1). MPS admits that Mr. Zhou is the author listed on a dissertation dated April 22, 2005 that is entitled “High Frequency, High Current Density Voltage Regulator,” in which he referenced “a scalable multi-phase surface mount coupling inductor structure.” MPS admits that the “References” section of this dissertation lists 136 papers, including the ’986 patent and other papers where “Charles R. Sullivan” or “Sullivan, C.R.” is listed as one of multiple authors. MPS notes that neither the ’408 patent nor the ’955 patent is among those papers. MPS denies the remaining allegations in Paragraph 23(d)(i).

- ii. MPS admits that Yan Dong was a former employee of MPS. MPS admits that Mr. Dong’s LinkedIn profile (<https://www.linkedin.com/in/yan-dong-56583639/>) states that he was employed at MPS from November 2008 through September 2016 as a “Power Architect/Senior Design Engineer.” MPS admits that Mr. Dong is the author listed on a dissertation entitled “Investigation of Multiphase Coupled-Inductor Buck Converters in Point-

of-Load Applications.” MPS admits that the “References” section of this dissertation lists 90 papers, including a paper authored by “J. Li, A. Stratakos, A. Schultz, C.R. Sullivan,” a paper authored by “Jieli Li, Charles R. Sullivan, Aaron Schultz,” and a paper authored by “A. M. Schultz and C.R. Sullivan.” MPS notes that neither the ’408 patent nor the ’955 patent is among those papers. MPS denies the remaining allegations in Paragraph 23(d)(ii).

- e. MPS admits that Volterra identified the ’986 patent in its original Complaint filed on December 9, 2019. MPS denies the remaining allegations in Paragraph 23(e).

24. Denied.

- a. MPS admits that it posts videos on its YouTube channel (<https://www.youtube.com/channel/UCqOx8jWRKEq4TpfcjCz0Isw>), including one where it discusses a “48V-1V” solution at APEC 2019. MPS denies the remaining allegations of Paragraph 24(a).
- b. MPS admits that it makes the MP2888A controller. MPS admits that Revision 1.1. of the MP2888A datasheet (accessible at

https://www.monolithicpower.com/en/documentview/productdocument/index/version/2/document_type/Datasheet/lang/en/sku/MP2888A/) is dated December 25, 2018 and states that the MP2888A has a “digital PWM-VID interface compatible with NVIDIA’s Open VReg specification” and “supports couple-inductor mode to reduce the overshoot during load releasing.” MPS admits that it makes the MP2965 controller. MPS further admits that the MP2965 datasheet accessible at https://www.monolithicpower.com/en/documentview/productdocument/index/version/2/document_type/Datasheet/lang/en/sku/MP2965/ states that MP2965 is “Intel VR13.HC/IMVP9 Compliant” and “supports couple inductor mode to reduce the overshoot during load releasing.” MPS admits that the aforementioned MP2888A datasheet and MP2965 datasheet are publicly accessible. MPS denies the remaining allegations of Paragraph 24(b).

- c. MPS admits that the MP2888A datasheet discussed above in Paragraph 24(b) is dated 2018 and states that MP2888A “supports couple-inductor mode to reduce the overshoot during load releasing.” MPS admits that a webpage for MP2888A

(<https://www.monolithicpower.com/en/mp2888a.html>) includes a section entitled “Evaluation Tools” and a section entitled “Design Resources.” MPS admits that a webpage for MP2965 (<https://www.monolithicpower.com/en/mp2965.html>) also includes a section entitled “Evaluation Tools” and “Design Resources.” MPS denies the remaining allegations in Paragraph 24(c).

- d. Denied.
- e. Denied.
- f. Denied.

25. Denied. Further, MPS notes that Volterra’s allegations of contributory infringement have been dismissed. D.I. 245.

- a. MPS admits that it manufactures the MP2888A and MP2965 controllers. As stated above in MPS’s response to Paragraph 24(b), MPS admits that the MP2888A datasheet (accessible by the public at https://www.monolithicpower.com/en/documentview/productdocument/index/version/2/document_type/Datasheet/lang/en/sku/MP2888A/) and the MP2965 datasheet (accessible to the public at <https://www.monolithicpower.com/en/documentview/productdocument/index/version/2/document>

[type/Datasheet/lang/en/sku/MP2965/](#)) state that these two controllers support couple inductor mode to reduce the overshoot during load releasing. MPS denies the remaining allegations in Paragraph 25(a).

- b. As stated above in MPS's response to Paragraph 24(c), MPS's webpages for MP2888A and MP2965 each include a section entitled "Evaluation Tools" and another section entitled "Design Resources." MPS denies the remaining allegations in Paragraph 25(b).

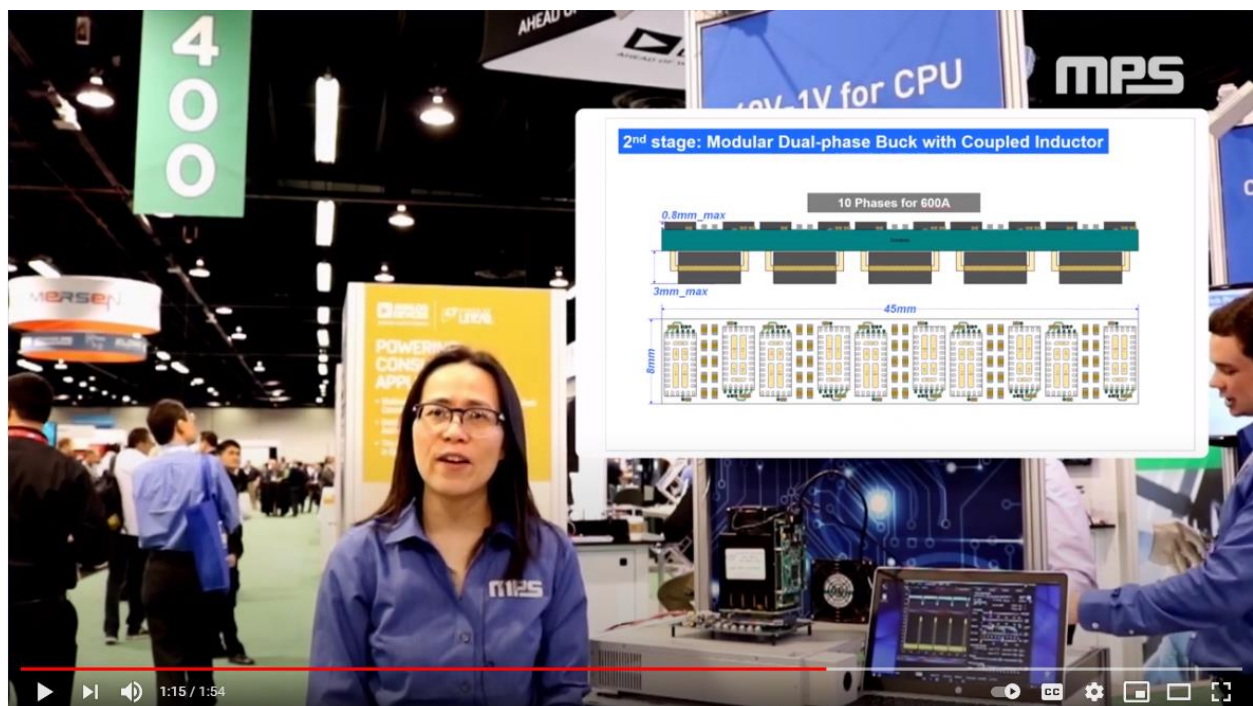
26. Denied.

27. MPS admits that the quoted language in paragraph 27 appears in claim 17 of the '986 patent.

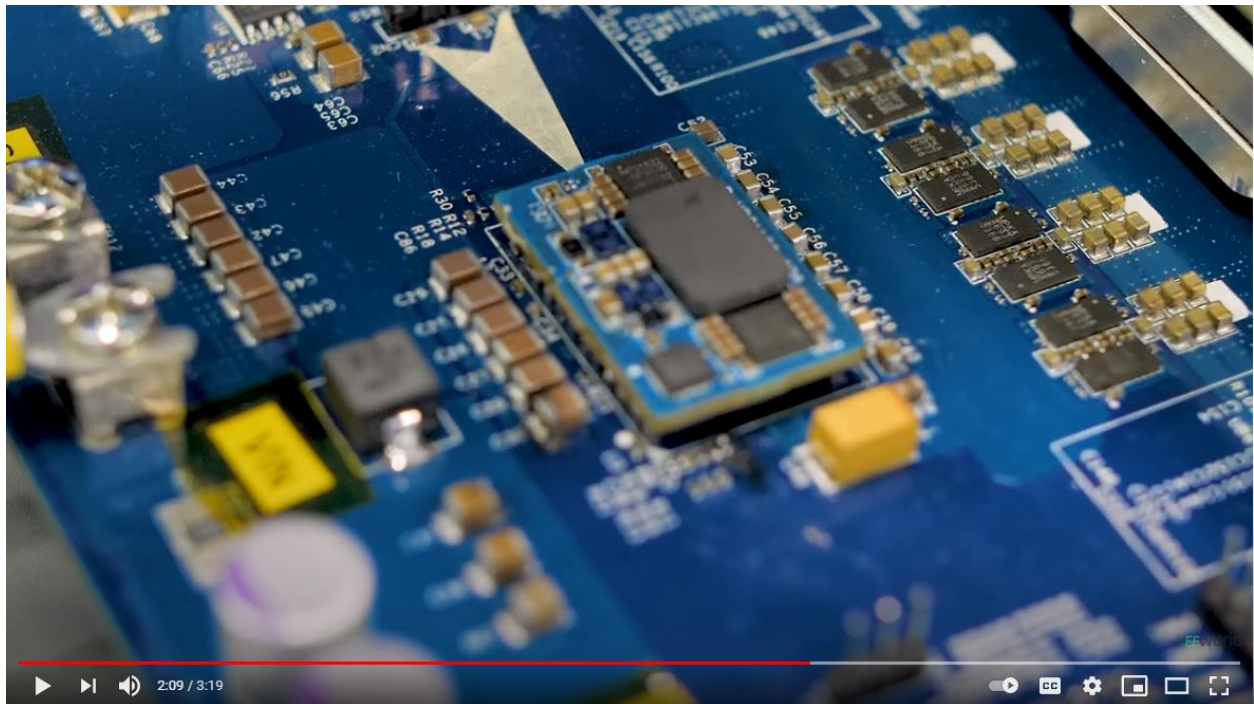
28. MPS admits that the video accessible at <https://www.youtube.com/watch?v=w7CmBr1t3Ns> ("First Video") discusses the "48-1V Power Solution for CPU, SoC or ASIC Controller" at APEC 2019. MPS admits that the following screenshot appears in this video ("First Screenshot"). MPS denies the remaining allegations in Paragraph 28.



29. MPS admits that the following screenshot (“Second Screenshot”) appears in the First Video. MPS denies the remaining allegations in Paragraph 29.



30. MPS admits that the Second Screenshot includes a diagram entitled “2nd stage: Modular Dual-phase Buck with Coupled Inductor.” MPS further admits that the screenshot below (“Third Screenshot”) appears in another video (accessible at <https://www.youtube.com/watch?v=WIC2SDWSins>) which discusses the “48-1V Power Solution for CPU, SoC or ASIC Controller” at APEC 2019 (“Second Video”).



MPS further admits that the screenshot below (“Fourth Screenshot”) appears in the First Video.

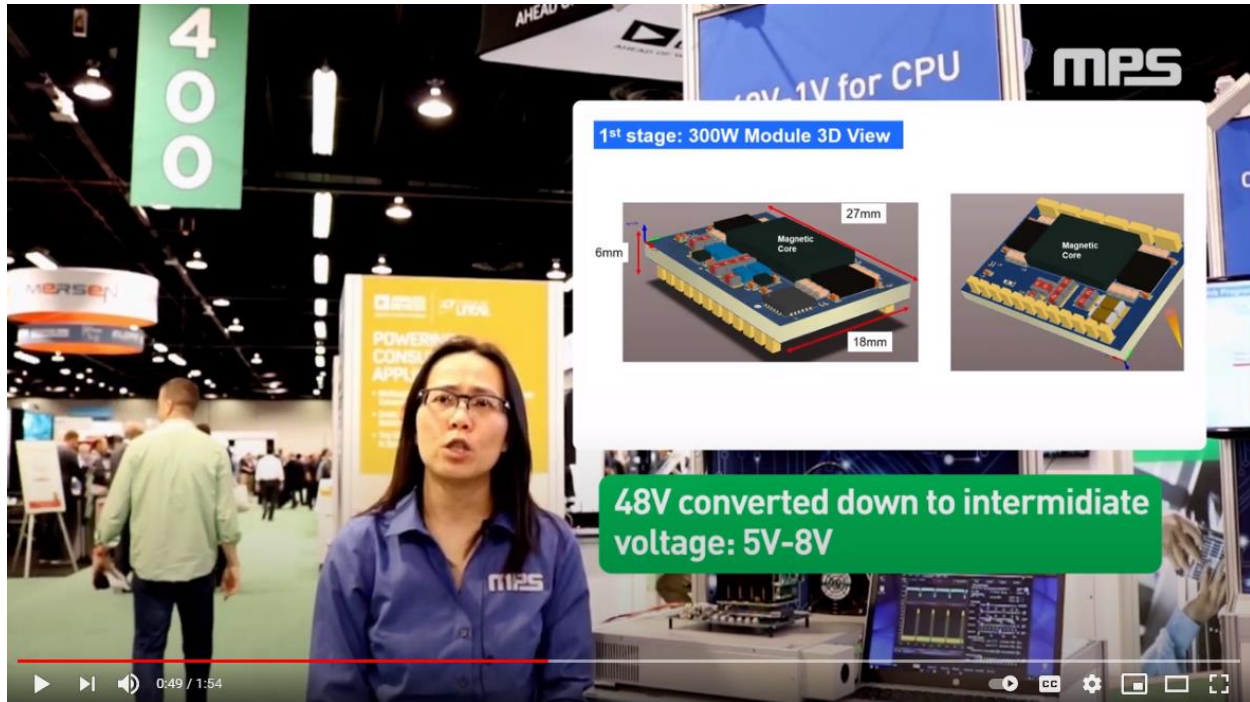


MPS denies the remaining allegations in Paragraph 30, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 30.

31. MPS admits that the quoted language in paragraph 31 appears in claim 18 of the '986 patent.

32. As stated above in MPS's response to Paragraph 30, MPS admits that this Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor." As stated above in MPS's response to Paragraph 30, MPS further admits that the Fourth Screenshot appears in the First Video. MPS further admits that the screenshot below ("Fifth Screenshot") appears in the First

Video. MPS admits that the Fifth Screenshot includes the label “48V converted down to intermediate[sic] voltage: 5V-8V” as shown below.



MPS denies the remaining allegations in Paragraph 32, including Volterra’s characterizations of and annotations to any of the screenshots referenced in Paragraph 32.

33. MPS admits that the quoted language in paragraph 33 appears in claim 20 of the ’986 patent.

34. As stated above in MPS’s response to Paragraph 30, MPS admits that the Second Screenshot includes a diagram entitled “2nd stage: Modular Dual-phase Buck with Coupled Inductor.” As stated above in MPS’s response to Paragraph 30, MPS further admits that the Fourth Screenshot appears in the First Video. As stated above in MPS’s response to Paragraph 32, MPS further admits that the Fifth

Screenshot includes the label “48V converted down to intermediate[sic] voltage: 5V-8V.” MPS denies the remaining allegations in Paragraph 34, including Volterra’s characterizations of and annotations (in red) added to any of the screenshots referenced in Paragraph 34.

35. MPS admits that the quoted language in paragraph 35 appears in claim 21 of the ’986 patent.

36. As stated above in MPS’s response to Paragraph 30, MPS admits that this Second Screenshot includes a diagram entitled “2nd stage: Modular Dual-phase Buck with Coupled Inductor.” As stated above in MPS’s response to Paragraph 30, MPS further admits that the Fourth Screenshot appears in the First Video. As stated above in MPS’s response to Paragraph 32, MPS further admits that the Fifth Screenshot includes the label “48V converted down to intermediate[sic] voltage: 5V-8V.” MPS denies the remaining allegations in Paragraph 36, including Volterra’s characterizations of and annotations to any of the screenshots referenced in Paragraph 36.

37. MPS admits that the quoted language in paragraph 37 appears in claim 23 of the ’986 patent.

38. As stated above in MPS’s response to Paragraph 30, MPS admits that this Second Screenshot appears in the First Video. MPS denies the remaining

allegations in Paragraph 38, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 38.

39. MPS admits that the First Video and Second Video referenced in the SAC are accessible to the public. MPS denies the remaining allegations in Paragraph 39.

40. Denied.

41. Denied.

42. Denied.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,525,408

43. MPS incorporates by reference its responses to Paragraphs 1-42 as if fully set forth herein.

44. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

45. Denied.

- a. MPS incorporates by reference its above response to Paragraph 23(a) as if fully set forth herein. MPS admits that the '408 patent shares a common inventor with the '986 patent based on the inventors listed on the face of those patents, but notes the '408 patent does not share a patent family with the '986 patent. MPS denies the remaining allegations in Paragraph 45(a).

- b. MPS incorporates by reference its above response to Paragraph 23(b) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 45(b).
- c. MPS incorporates by reference its above response to Paragraph 23(c) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 45(c).
- d. Denied.
 - i. MPS incorporates by reference its above response to Paragraph 23(d)(i) as if fully set forth herein. MPS admits that the '408 patent shares a common inventor with the '986 patent based on the inventors listed on the face of those patents, but notes the '408 patent does not share a patent family with the '986 patent. MPS denies the remaining allegations in Paragraph 45(d)(i).
 - ii. MPS incorporates by reference its above response to Paragraph 23(d)(ii) as if fully set forth herein. MPS admits that Mr. Dong is the author of a dissertation entitled "Investigation of Multiphase Coupled-Inductor Buck Converters in Point-of-Load Applications." MPS admits that this dissertation states that "C. Sullivan" "did the

analysis of n-phase ($n > 2$) coupled-inductor buck converter when the converter duty cycle D is less than $1/n$.” MPS admits that the “References” section of this dissertation lists 90 papers, including 6 papers that list “C.R. Sullivan” or “Charles R. Sullivan” as one of multiple authors. MPS admits that the face of the ’408 patent states that it is titled “Method for making magnetic components with N-phase coupling, and related inductor structures.” MPS admits that under the section entitled “Background of the Invention,” under subsection “1. Field of the Invention,” the ’408 patent states that “the invention relates to construction of a coupled inductor within a multi-phase DC-to-DC converter.” MPS notes that the ’408 patent is not listed among the citations of Mr. Dong’s dissertation. MPS denies the remaining allegations in Paragraph 45(d)(ii).

e. Denied.

46. Denied.

- a. MPS incorporates by reference its above response to Paragraph 24(a) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 46(a).
- b. MPS incorporates by reference its above response to Paragraph 24(b) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 46(b).
- c. MPS incorporates by reference its above response to Paragraph 24(c) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 46(c).
- d. MPS incorporates by reference its above response to Paragraph 24(d) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 46(d).
- e. Denied.
- f. Denied.

47. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

- a. MPS incorporates by reference its above response to Paragraph 25(a) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 47(a).

- b. MPS incorporates by reference its above response to Paragraph 25(b) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 47(b).

48. Denied.

49. MPS admits that the quoted language in paragraph 49 appears in claim 14 of the '408 patent.

50. As stated above in MPS's responses to Paragraph 29 and 30 above, MPS admits that the Second Screenshot and Third Screenshot appear in the First Video and Second Video, respectively. MPS denies the remaining allegations in Paragraph 50, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 50.

51. As stated above in MPS's response to Paragraph 29 above, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 51, including Volterra's characterizations of and annotations (in red) added to any of the screenshots referenced in Paragraph 51.

52. As stated above in MPS's responses to Paragraphs 29 and 30 above, MPS admits that the Second Screenshot and Third Screenshot appear in the First Video and Second Video, respectively. MPS denies the remaining allegations in Paragraph 52, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 52.

53. As stated above in MPS's response to Paragraph 29 above, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 53, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 53.

54. As stated above in MPS's response to Paragraph 29 above, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 54, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 54.

55. MPS admits that the quoted language in paragraph 55 appears in claim 20 of the '408 patent.

56. As stated above in MPS's response to Paragraph 29 above, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 56, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 56.

57. MPS incorporates by reference its above response to Paragraph 39 as if fully set forth herein.

58. Denied.

59. Denied.

60. Denied.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,772,955

61. MPS incorporates by reference its responses to Paragraphs 1-60 as if fully set forth herein.

62. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

63. Denied.

- a. MPS incorporates by reference its above responses to Paragraphs 23(a) and 45(a) as if fully set forth herein. MPS admits that the '955 patent shares a common inventor with the '986 patent based on the inventors listed on the face of those patents, but notes the '955 patent does not share a patent family with the '986 patent. MPS denies the remaining allegations in Paragraph 63(a).
- b. MPS incorporates by reference its above responses to Paragraphs 23(b) and 45(b) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 63(b).
- c. MPS incorporates by reference its above responses to Paragraphs 23(c) and 45(c) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 63(c).
- d. Denied.

- i. MPS incorporates by reference its above responses to Paragraphs 23(d)(i) and 45(d)(i) as if fully set forth herein. MPS admits that the '955 patent shares a common inventor with the '986 patent based on the inventors listed on the face of those patents, but notes the '955 patent does not share a patent family with the '986 patent. MPS denies the remaining allegations in Paragraph 63(d)(i).
- ii. MPS incorporates by reference its above responses to Paragraphs 23(d)(ii) and 45(d)(ii) as if fully set forth herein. MPS admits that the face of the '955 patent states that it is titled "Method for making magnetic components with N-phase coupling, and related inductor structures." MPS notes that the '955 patent is not listed among the citations of Mr. Dong's dissertation. MPS denies the remaining allegations in Paragraph 63(d)(ii).

e. Denied.

64. Denied.

- a. MPS incorporates by reference its above responses to Paragraphs 24(a) and 46(a) as if fully set forth herein.

- b. MPS incorporates by reference its above responses to Paragraphs 24(b) and 46(b) as if fully set forth herein.
- c. MPS incorporates by reference its above responses to Paragraphs 24(c) and 46(c) as if fully set forth herein.
- d. MPS incorporates by reference its above responses to Paragraphs 24(d) and 46(d) as if fully set forth herein.
- e. Denied.
- f. Denied.

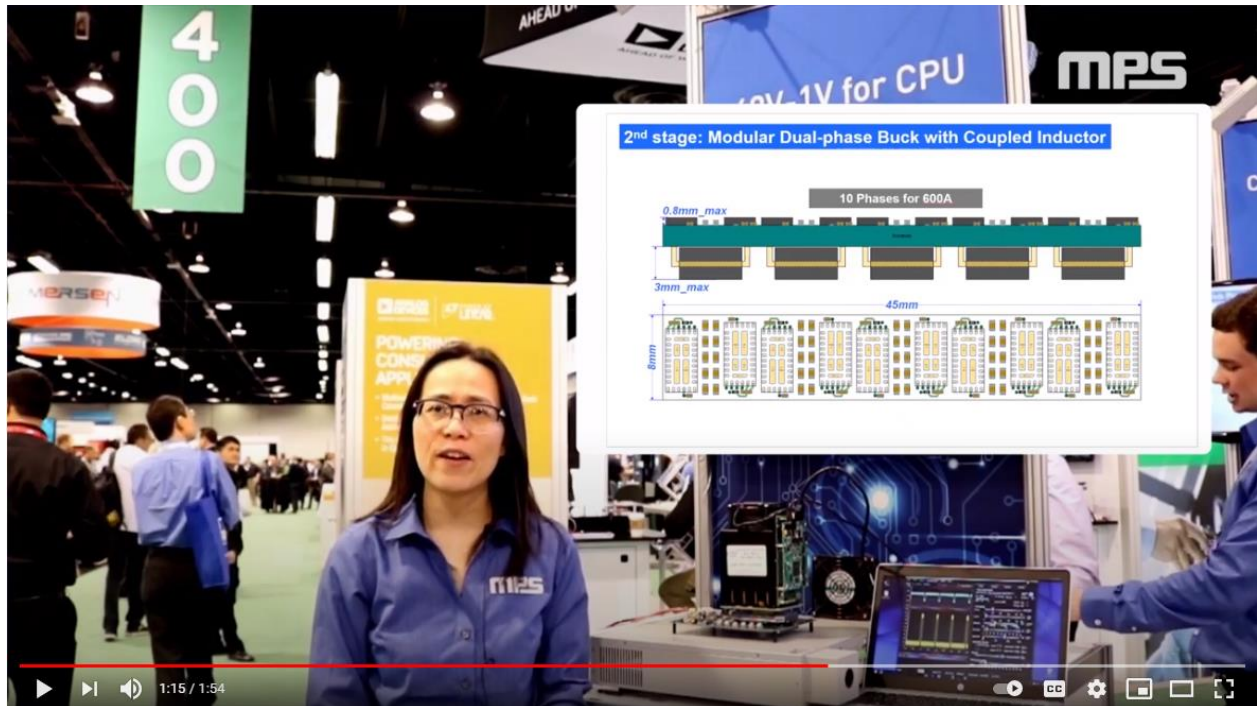
65. Denied. Further, MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

- a. MPS incorporates by reference its above responses to Paragraphs 25(a) and 47(a) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 65(a).
- b. MPS incorporates by reference its above responses to Paragraphs 25(b) and 47(b) as if fully set forth herein. MPS denies the remaining allegations in Paragraph 65(b).

66. Denied.

67. MPS admits that the quoted language in paragraph 67 appears in claim 12 of the '955 patent.

68. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS admits that the Second Screenshot includes a diagram with the label "10 Phases for 600 A" (as shown below).



MPS denies the remaining allegations in Paragraph 68, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 68.

69. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 69, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 69.

70. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 70, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 70.

71. MPS admits that the quoted language in paragraph 71 appears in claim 13 of the '955 patent.

72. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 72, including Volterra's characterizations of and annotations (in red) added to any of the screenshots referenced in Paragraph 72.

73. MPS admits that the quoted language in paragraph 73 appears in claim 14 of the '955 patent.

74. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 74, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 74.

75. MPS admits that the quoted language in paragraph 75 appears in claim 15 of the '955 patent.

76. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining

allegations in Paragraph 76, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 76.

77. MPS admits that the quoted language in paragraph 77 appears in claim 16 of the '955 patent.

78. As stated in MPS's above response to Paragraph 30, MPS admits that the Fourth Screenshot appears in the First Video. MPS admits that the First Video discusses a "48 volt to 1 volt power solution for CPU, SoC or ASIC Controller." MPS denies the remaining allegations in Paragraph 78, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 78.

79. As stated above in MPS's response to Paragraphs 29, MPS admits that the Second Screenshot appears in the First Video. As stated above in MPS's response to Paragraph 68, MPS admits that the Second Screenshot includes a diagram with the label "10 Phases for 600 A." MPS denies the remaining allegations in Paragraph 79, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 79.

80. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 80, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 80.

81. As stated above in MPS's responses to Paragraphs 29 and 32, MPS admits that the Second Screenshot and Fifth Screenshot appear in the First Video. MPS admits that the Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor." MPS admits that the Fifth Screenshot includes the label "48V converted down to intermediate[sic] voltage: 5V-8V." MPS denies the remaining allegations in Paragraph 81, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 81.

82. As stated above in MPS's responses to Paragraphs 29, 30, and 32, MPS admits that the Second Screenshot, Fourth Screenshot, and Fifth Screenshot appear in the First Video. MPS admits that the Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor." MPS admits that the Fifth Screenshot includes the "48V converted down to intermediate[sic] voltage: 5V-8V." MPS denies the remaining allegations in Paragraph 82, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 82.

83. MPS admits that the quoted language in paragraph 83 appears in claim 17 of the '955 patent.

84. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining

allegations in Paragraph 84, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 84.

85. MPS admits that the quoted language in paragraph 85 appears in claim 18 of the '955 patent.

86. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS admits that the Second Screenshot includes a diagram with the label "10 Phases for 600A." MPS denies the remaining allegations in Paragraph 86, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 86.

87. MPS admits that the quoted language in paragraph 87 appears in claim 19 of the '955 patent.

88. As stated in MPS's above responses to Paragraphs 29 and 30, MPS admits that the Second Screenshot and Third Screenshot appear in the First Video and Second Video, respectively. MPS admits that the Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor," where the diagram includes the label "10 Phases for 600A." MPS denies the remaining allegations in Paragraph 88, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 88.

89. MPS admits that the quoted language in paragraph 89 appears in claim 20 of the '955 patent.

90. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 90, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 90.

91. MPS admits that the quoted language in paragraph 91 appears in claim 21 of the '955 patent.

92. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 92, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 92.

93. MPS admits that the quoted language in paragraph 93 appears in claim 23 of the '955 patent.

94. As stated in MPS's above responses to Paragraphs 29 and 30, MPS admits that the Second Screenshot and Third Screenshot appear in the First Video and Second Video, respectively. MPS admits that the Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor," where the diagram includes the label "10 Phases for 600A." MPS denies the remaining allegations in Paragraph 94, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 94.

95. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 95, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 95.

96. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 96, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 96.

97. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 97, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 97.

98. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 98, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 98.

99. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 99, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 99.

100. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS admits that the Second Screenshot includes a diagram with the label "10 Phases for 600A." MPS denies the remaining allegations in Paragraph 100, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 100.

101. MPS admits that the quoted language in paragraph 101 appears in claim 24 of the '955 patent.

102. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 102, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 102.

103. MPS admits that the quoted language in paragraph 103 appears in claim 25 of the '955 patent.

104. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 104, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 104.

105. MPS admits that the quoted language in paragraph 105 appears in claim 26 of the '955 patent.

106. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 106, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 106.

107. MPS admits that the quoted language in paragraph 107 appears in claim 27 of the '955 patent.

108. As stated above in MPS's response to Paragraph 29, MPS admits that the Second Screenshot appears in the First Video. MPS denies the remaining allegations in Paragraph 108, including Volterra's characterizations of and annotations to any of the screenshots referenced in Paragraph 108.

109. MPS admits that the quoted language in paragraph 109 appears in claim 28 of the '955 patent.

110. As stated above in MPS's responses to Paragraphs 29, 30, and 32, MPS admits that the Second Screenshot, Fourth Screenshot, and Fifth Screenshot appear in the First Video. MPS admits that the Second Screenshot includes a diagram entitled "2nd stage: Modular Dual-phase Buck with Coupled Inductor," where the diagram includes the label "10 Phases for 600A." MPS further admits that the Fifth Screenshot includes the "48V converted down to intermediate[sic] voltage: 5V-8V." MPS denies the remaining allegations in Paragraph 110, including Volterra's

characterizations of and annotations to any of the screenshots referenced in Paragraph 110.

111. MPS admits that the First Video and Second Video referenced in the SAC are accessible to the public. MPS denies the remaining allegations in Paragraph 111.

112. Denied.

113. Denied.

114. Denied.

PRAYER FOR RELIEF

A response to Volterra's Prayer for Relief is not required. To the extent that any response is required, MPS denies that Volterra is entitled to any relief sought in its SAC or any relief whatsoever.

DEMAND FOR JURY TRIAL

MPS denies that Volterra has raised any issues in the SAC that entitle it to a trial by jury.

AFFIRMATIVE AND OTHER DEFENSES

Pursuant to Federal Rule of Civil Procedure 8(c), and without altering any applicable burdens of proof or burdens of persuasion, MPS asserts the following defenses to the SAC and reserves its right to assert additional defenses. Assertion

of a defense is not a concession that MPS has the burden of proving the matter asserted.

FIRST AFFIRMATIVE DEFENSE

(Non-Infringement)

Defendant does not and has not infringed any valid, enforceable, asserted claim of the Asserted Patents, either literally or under the doctrine of equivalents, directly, contributorily, by inducement, or in any other manner. MPS notes that Volterra's allegations of contributory infringement have been dismissed. D.I. 245.

SECOND AFFIRMATIVE DEFENSE

(Invalidity)

Each asserted claim of the Asserted Patents is invalid for failure to comply with one or more of the requirements of Title 35 of the United States Code, including without limitation, 35 U.S.C. §§ 101, 102, 103, 112, and/or 116, and the rules, regulations, and laws pertaining thereto, obviousness type double patenting, and/or any judicially created doctrines of invalidity.

THIRD AFFIRMATIVE DEFENSE

(Prosecution History Estoppel and Disclaimer)

Plaintiff is barred, based on statements, representations, and admissions made during prosecution of the patent applications resulting in the Asserted Patents or related patent applications, from asserting any interpretation of any valid,

enforceable claim of the Asserted Patents that would be broad enough to cover any Accused Product alleged to infringe the Asserted Patents, either literally or under the doctrine of equivalents.

FOURTH AFFIRMATIVE DEFENSE

(Equitable Defenses)

Plaintiff's attempted enforcement of the Asserted Patents against MPS is barred by one or more of the equitable doctrines, such as estoppel, acquiescence, waiver, and unclean hands.

FIFTH AFFIRMATIVE DEFENSE

(Limitation on Damages)

Plaintiff's claims for damages are statutorily limited or barred by 35 U.S.C. §§ 286 and/or 287.

SIXTH AFFIRMATIVE DEFENSE

(Preclusion of Costs)

Plaintiff is barred under 35 U.S.C. § 288 from recovering costs associated with its action.

SEVENTH AFFIRMATIVE DEFENSE

(No Injunctive Relief)

Plaintiff is not entitled to injunctive relief as they have, at a minimum, an adequate remedy at law upon any finding of infringement and have not suffered any irreparable injury.

EIGHTH AFFIRMATIVE DEFENSE

(No Willfulness)

Plaintiff is barred from obtaining a finding of willfulness or receiving enhanced damages because they have not alleged that MPS engaged in reprehensible conduct, and MPS has engaged in no such conduct, which is a prerequisite for a willfulness finding and an award of enhanced damages. With respect to the '986 patent, MPS had no knowledge of its alleged infringement, and had a good-faith belief that asserted claims 17, 18, 20, 21, and 23 were invalid. *See* MPS_DE-00010889; MPS_DE-00010348; MPS_DE-00010405; MPS_DE-00010407 [REDACTED] With respect to the '408 and '955 patents, MPS had no pre-suit awareness of these patents, had no knowledge of its alleged infringement, and had a good-faith belief that the asserted claims were invalid. *See* MPS_DE-00010840; MPS_DE-00010473 [REDACTED]

NINTH AFFIRMATIVE DEFENSE

(Failure to State a Claim)

The SAC fails to state a claim upon which relief can be granted, for at least the reasons described in MPS's Motion to Dismiss the SAC filed in this action (D.I. 83).

TENTH AFFIRMATIVE DEFENSE

(Express or Implied License, Patent Exhaustion)

To the extent Volterra or any other owner of the Asserted Patents licensed the patents to a customer or supplier of MPS, MPS has either an express or implied license to practice the Asserted Patents, or the Asserted Patents are exhausted.

ELEVENTH AFFIRMATIVE DEFENSE

Plaintiff's claims for relief are limited and/or barred, in whole or in part, to the extent that Plaintiff is barred from suing MPS for indirect infringement [REDACTED]

See, e.g., *Met-Coil Sys. Corp. v. Korner Unlimited, Inc.* 803 F.2d 684,

687 (Fed. Cir. 1986); *TransCore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271, 1275 (Fed. Cir. 2009).

TWELFTH AFFIRMATIVE DEFENSE

(Patent Misuse)

Plaintiff's claims for relief are limited and/or barred, in whole or in part, to the extent that Plaintiff and its parent, Maxim Integrated, have engaged and continue to engage in a scheme to impermissibly broaden the scope of the Asserted Patents with anticompetitive effect. Even though the claims of the Asserted Patents recite very specific features of coupled inductors, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Thus, Plaintiff's licensing practices have an anticompetitive effect.

THIRTEENTH AFFIRMATIVE DEFENSE

(Lack of Standing)

Plaintiff's claims for relief are limited and/or barred, in whole or in part, to the extent it or any predecessor-in-interest lacked standing to bring and maintain this patent infringement action against MPS because Plaintiff failed to join co-owner or licensee with enforcement rights of the Asserted Patents, [REDACTED], to this suit. [REDACTED] ownership rights in the Asserted Patents are based on at least two independent sources: [REDACTED]

[REDACTED]

[REDACTED]

FOURTEENTH AFFIRMATIVE DEFENSE

(Incorrect Inventorship)

The '986 patent is invalid under 35 U.S.C. 102(f) at least because it fails to list Jieli Li as an inventor.

The '408 and '955 patents are invalid under 35 U.S.C. 102(f) at least because they incorrectly list Angel Gentchev as an inventor.

FIFTEENTH AFFIRMATIVE DEFENSE

(Not Exceptional Case)

Plaintiff is not entitled to a finding that this case is exceptional warranting attorneys' fees under 35 U.S.C. § 285, or pursuant to the Court's inherent power.

SIXTEENTH AFFIRMATIVE DEFENSE

(Failure to Join a Party)

Plaintiff's claims for relief are limited and/or barred, in whole or in part, to the extent that the SAC fails to join a party under Fed. R. Civ. Pro. Rule 19.

RESERVATION OF RIGHTS

MPS reserves the right to amend its Answer and reserves all defenses set out in Rule 8(c) of the Federal Rules of Civil Procedure, the Patent Laws of the United States, and any other defenses, at law or in equity, which become applicable after the substantial completion of discovery or otherwise in litigation.

PRAYER FOR RELIEF

WHEREFORE, MPS requests that this Court enter a judgment in its favor and against Volterra as follows:

- A. Dismissing Volterra's Complaint with prejudice in its entirety and denying all relief requested therein;
- B. Entering judgment in favor of MPS and adjudging that Volterra takes nothing;
- C. Entering judgment that MPS has not infringed and is not infringing any valid claim of the Asserted Patents, directly or indirectly, either literally or under the doctrine of equivalents;
- D. Entering judgment that each of the claims of the Asserted Patents are invalid and/or unenforceable;
- E. Declaring that this case is exceptional under 35 U.S.C. § 285 and awarding MPS its costs, expenses, and reasonable attorney fees; and
- F. Granting such further relief to MPS as is just and proper

DEMAND FOR JURY TRIAL

MPS requests trial by jury.

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Dated: October 28, 2021

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CERTIFICATE OF SERVICE

I, Andrew E. Russell, hereby certify that on October 28, 2021, this document was served on the persons listed below in the manner indicated:

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